Abstract

A test apparatuss for testing substrates at low temperatures has a chuck, which can be displaced in the working area by means of a chuck drive, the temperature of which can be controlled using heating and cooling means. The chuck has a receiving surface for receiving a test substrate and holding means for fixing a substrate carrier which receives the test substrate. Spatially and thermally defined test conditions are maintained with minimal energy and labor costs both at room temperatures and at low temperatures. This is achieved by providing a vacuum chamber which surrounds the working area of the chuck. The chuck is on one side thermally decoupled from the uncooled chuck drive and on the other side is thermally connected in a releasable manner to the test substrate. The cooled chuck and the cooled test substrate are shielded from the thermal radiation of the surrounding uncooled assemblies by means of a directly cooled thermal radiation shield.

Fig. 1